REMARKS

This is in response to the Office Action dated October 19, 2007. In view of the following representations, the Examiner is respectfully requested to reconsider the merits of the present application.

On pages 2-4 of the Office Action, claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3010211 in view of JP 54-130451. This rejection is respectfully traversed.

An important feature of the invention, as defined in claim 5, is the particular structures to which the additional welding operation is applied. This is a fundamental difference between JP '211 and claim 5 of the present invention.

In the present invention, the additional welding method is applied near a weld zone formed by an initial welding operation in which a horizontal annex is connected to a vertical member.

As explained in the previous response, JP '211 discloses a method of connecting an annex 2 to a main steel plate 1 by angular rotation welding. These features are shown in the plan view (top or bottom) and front view shown in Fig. 1 in the JP '211 reference. Thus, there is no question that the main steel plate is disposed in a horizontal plane. This represents a significant difference from the present invention in which an annex plate B is disposed horizontally and is welded to a vertically disposed plate A (see Fig. 1).

In the rejection of claim 5, the Examiner addresses this limitation as follows:

"*JP 3010211 discloses an arc welding method using a shielding gas of rare gas (argon) mixed with oxygen (e.g. 98% argon and 2% oxygen) for repair welding of a welding material for a horizontal annex 2 to a vertical member (see Figure 1)...*"; (page 2)

Also, in the "Response to Arguments" section of the Office Action, the Examiner states:

"*Regarding the argument in the paragraph bridging pages 4 and 5 of the remarks, JP 3010211 B1 (see above section 3) discloses welding of a horizontal annex 2 to a vertical member (see Figure 1), such that a linear weld line would be formed around edges of the horizontal annex during arc welding.*" (page 5)

However, the annex 2 is unquestionably applied to horizontal member 1 as shown in Fig. 1 of JP '211. Thus, the statement that the annex is welded to a vertical member is not supported by the disclosure of JP '211. Furthermore, any interpretation of the steel plate disclosed in JP '211 as a "vertical" member would unreasonable as it would render the claim language meaningless.

Note that the dimensions of the steel metal plate are set forth in lines 14-18 of page 3 of the JP '211 translation, and it is clear that the thickness dimension of the main steel plate 1 is shown in the front view of Fig. 1. The annex 2 is connected to horizontal surfaces of the plate 1 by a single welding layer 3. This is in clear contrast to the present invention, as defined in claim 5, in which the horizontal annex B is further connected to a vertical surface of plate A by the additional welding process (see Figs. 1-2). Clearly, an additional welding operation is not disclosed or suggested by JP '211.

Further, claim 5 specifies that the "arc welding operation is performed by moving so that

a linear weld line is formed, in turn, along an upper side of the horizontal annex, a side face of the horizontal annex downward linearly along the side face of the horizontal annex, and a lower side of the horizontal annex." In JP '211 the initial (only) welding operation is formed only along the sides of the horizontal annex, and not along an upper surface thereof.

In view of the above, it is clear that the structures, recited in claim 5, to which an additional welding operation is applied are distinctly and substantially different from the connected structures in JP '211. Consequently, if a residual stress reducing method disclosed in JP '451 is applied to the welded joint disclosed in JP '211, the cracking problem, addressed in the present invention, would not be solved because the residual stress reducing method of JP '451 would be applied to the welded joint of JP '211 in which the annex is connected to a horizontal plate. JP '451 does not disclose any dispositional change of the annex of the welded joint from vertical to horizontal.

In view of the above, it is submitted that claim 5 of the present application is clearly allowable over any combination of the applied prior art references. The Examiner therefore is requested to pass this case to issue.

In the event that the Examiner has any comments or suggestions of a nature necessary to place this case in condition for allowance, then the Examiner is requested to contact Applicant's undersigned attorney by telephone to promptly resolve any remaining matters.

Respectfully submitted,

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